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Biotechnology Notes

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Biotechnology Notes, a compilation of agency activities, news events, and upcoming meetings, is prepared for members of the U.S. Department of Agriculture's (USDA) Committee on Biotechnology in Agriculture (CBA) by USDA's Office of Agricultural Biotechnology (OAB).

INSIDE USDA

BIOTECH PANEL FEATURED AT OUTLOOK CONFERENCE

USDA's 69th Annual Outlook Conference included a lively session on agricultural biotechnology and what consumers can expect to see on their grocer's shelves. The genetically engineered tomato from Calgene, known as the "Flavr Savr" tomato, will probably be the first such product to hit the stands this year. According to panelist Tom Churchwell, President and CEO of Calgene Fresh Inc., Evanston, IL., 66% of consumers in test markets say they will pay more for such a tomato if they feel they are getting good value. He said Calgene Fresh worked with consumers to design the packaging and the accompanying literature which describes the technology used to produce the tomato.

Another panelist, Caird E. Rexroad Jr., an Agricultural Research Service research leader in Beltsville, MD, discussed transgenic animals. Rexroad said the science of genetically modifying animals has not had the same degree of success as research applied to plants. In the short term (1-5 years), Rexroad sees a need for more research on genes that affect health and production traits in animals and more use of animals as transplant donors. In 15-20 years, he would like to see some real inroads made in the genetic modification of livestock.

The other panelists included Thomas Hoban, sociologist from North Carolina State University, and Barry Teater, Public Affairs Manager at the North Carolina Biotechnology Center, Research Triangle Park, NC, who presented a new video on agricultural biotechnology in that state. The session was narrated by Terry Medley, Director of USDA's Biotechnology, Biologics and Environmental Protection Division of the Animal and Plant Health Inspection Service.

MCCARTHY SELECTED AS ACTING COORDINATOR FOR NAL'S BIC

Susan McCarthy, the editor of *Probe* magazine and coordinator for the plant genome data and information center, will become acting coordinator of the National Agricultural Library's (NAL) Biotechnology Information Center (BIC) in Beltsville, MD. McCarthy replaces Robert Warmbrodt, who died recently.

The BIC provides a wide range of information services and publications related to agricultural biotechnology. The services are available to all USDA employees, Federal, state, and local government officials, academic and private institutions, industry, and the general public. The Center also welcomes and encourages requests and inquiries from the international biotechnology and scientific community. For more information, please call BIC at 301-504-5340; Fax: 301-504-7098.

ARABIDOPSIS DATABASE NOW AVAILABLE

USDA's Plant Genome Research Program and Massachusetts General Hospital have released for public distribution an *Arabidopsis thaliana* database (AAtDB). *Arabidopsis* is a small flowering plant of the mustard family that is used as a model system for the Plant Genome Program. The AAtDB is a generic genome database that can be reconfigured easily to present information from any organism.

Data from *Arabidopsis* and many other species including soybean, corn, wheat, and pine will be incorporated into a central database currently under development. The central database will be installed at USDA's NAL and is scheduled for public access by the end of 1993.

To learn more about AAtDB contact Sam Cartinhour or J. Michael Cherry via Internet computer mail at "curator@frodo.mgh.harvard.edu" or via Fax at 617-726-6893.

NEWS AROUND THE NATION (AND THE WORLD)

BIOTECH WORKSHOPS TO BE HELD

Pennsylvania State University's Biotechnology Institute will conduct many hands-on workshops throughout 1993 on different aspects of biotechnology, including plant biotechnology methods. For further information or to receive registration materials, write

to the Biotechnology Institute, Pennsylvania State University, 519 Wartik Laboratory, University Park, PA 16802-9959.

OECD REVIEWS SURVEY RESULTS ON PUBLIC AWARENESS

As reported in the November issue of *Biotechnology Notes*, the Organization for Economic Cooperation and Development (OECD) conducted a survey on the state of public information/public education on biotechnology in member countries. Comments from 11 of the 24 member countries surveyed have now been reviewed. All the countries reported a widespread perception of a need for public information/education in biotechnology. The findings also reveal that countries believe the most crucial and most effective programs are those directed toward teachers, followed by programs for the general public, and last, decision makers.

OECD believes it could play a future role in the exchange of information, serving as a clearing house for member countries. It may also analyze methodologies, review and compare opinion surveys, and identify specific themes which could lead to joint efforts among member nations.

NEW REPORT ON BIOETHICS IN EUROPE

A new report on bioethics is now available from the European Parliament. Animal growth hormones, transgenic animals, patenting life forms, novel foods, and other topics are covered along with an assessment and comparative analysis of the social and legal issues. To receive a copy, in English, write to STOA Programme, European Parliament, Schuman 4/81, L-2929, Luxembourg; or call 352-430-02511; Fax: 352-430-02418.

LOOKING BACK AT NTI CONFERENCES

One of the highlights of 1992 was a series of 10 National Technology Initiative (NTI) conferences that took place around the country. The "town meetings" brought together more than 3500 representatives from high tech industries, Federal laboratories, universities, and government to create a better understanding of how firms can commercialize new technological innovations more quickly and effectively. Since those meetings began last February, 450 new cooperative research and development agreements (CRADA's) have been signed -- more than a third of all CRADA's signed to date between government agencies and private industry.

The conference attendees also noted several areas of technology transfer that could be improved upon: 1) The slow pace in which

the public sector processes CRADA's; 2) A lack of awareness and sensitivity of the public sector when working with private sector partners; 3) Lack of long-term financing for high-tech start-up companies; 4) The lack of communication between the people who manage money and those who manage the technology; and 5) The need to modernize outmoded financial accounting practices. A copy of the report may be obtained by calling the Office of Agricultural Biotechnology (OAB) at 703-235-4419; Fax: 703-235-4429.

BIOTECHNOLOGY POLICY FORUM SCHEDULES NEW PROGRAMS

Matthew Sheffield, Executive Director of Congress' Biotechnology Policy Forum, has put together two exciting programs on biotechnology for your thinking pleasure. Beginning February 1, the public may hear Governors Weld (MA), Wilson (CA), and Schaeffer (MD) discuss "States of the Art: Biotechnology in Massachusetts, Maryland, and California."

"Biotechnology 101" is the theme of the March 8 program, featuring Adrienne Massey of the North Carolina Biotechnology Center and Alexandra McKently of the Land Pavilion at Epcot Center in Orlando, FL. For those individuals that want a basic introduction to biotechnology, this program is highly recommended. This lecture also marks the beginning a week-long exhibit on biotechnology that will be on display in the Senate Russell Building Rotunda.

Both programs begin at noon and take place in the Rayburn House Office Building. For more details or to make a reservation, please call Sheffield at 202-544-1880.

UPCOMING "BIOTECH TUESDAY" EVENTS

For an afternoon of stimulating discussion, reserve a space now at the upcoming lecture series sponsored by the Washington Metropolitan Chapter of the Association of Biotechnology Companies (ABC). The location is the American Association for the Advancement of Science, 1333 H St., N.W., Washington, DC, from 3:30-5:00 p.m.. The schedule is as follows:

February 9:	The State of the Biotechnology Industry
March 9:	Biotechnology Patents
April 12:	1993 ABC International Meeting in Research Triangle
May 11:	Biotechnology Patent Infringement Litigation
June 8:	Ethical Issues in Biotechnology
July 13:	Genetically Engineered Crops

For more details or to make a reservation, call Richard Okiuye at ABC at 202-234-3330.

CLASS SCHEDULE NOW AVAILABLE

The 1993 schedule of courses offered by Biotechnology Training Programs is now available. The classes are taught around the country and include both beginning and advanced work in DNA methodologies. For more information call Susannah Chance at 1-800-821-4861; Fax: 515-232-8306.

IN CASE YOU WEREN'T THERE

■ "Agricultural Biotechnology: Boom or Bust" was the topic of a presentation given by Charles E. Hess at the Executive Seminar on Agricultural Issues held December 9 in Sacramento, CA. The seminar was sponsored by the University of California, Berkeley, and the Commonwealth Club of California.

Hess, currently a professor at the University of California, Davis, and formerly USDA Assistant Secretary of Science and Education, said that the scientific advances of agricultural biotechnology are exciting, and that "molecular biology provides us with the ability to ask questions and develop knowledge about the way plants and animals grow and develop in a way that was not previously possible." He noted that public acceptance of the technology is still an important issue. Concerning regulatory matters, Hess said "there is movement in coming to a solution to the regulatory dilemma which has plagued biotechnology since 1986."

■ The Environmental Protection Agency's (EPA) Scientific Advisory Panel met December 18 in Crystal City, VA to discuss the FIFRA (Federal Insecticide, Fungicide and Rodenticide Act) proposal on "pesticidal" plants, which EPA hopes to publish in the *Federal Register* by the end of 1993. Peter Palukaitis of Cornell University discussed the risk of coat proteins combining with viral nucleic acids and introducing a virulent strain of a virus into the transgenic plant. Coat proteins are supposed to confer resistance to plants. Some worry, however, that the coat protein may actually combine with viral DNA or RNA and introduce a virus into the plant's genome. Palukaitis said such a risk for both related and unrelated viruses is slim.

Margaret Mellon of the National Wildlife Federation said EPA's proposed policy paper was well thought out but "imbued with the language and ideology of the Bush Administration's Competitiveness Council" and should be scrapped. In addition, Mellon believes the

entire coordinated framework for the oversight of biotechnology should be re-examined. She also advocated new legislation for biotechnology.

NEW PUBLICATIONS

■ "Plant Gene Expression Center: Biotechnology for Agriculture" is a new brochure that describes the activities of ARS' plant gene center in Albany, CA. To receive a complimentary copy, please call either OAB at 703-235-4419 or the Center's Director, Gerald Still, at 510-559-5900.

■ *Food Safety Assessment* edited by J. Finley, S. Robinson, and D. Armstrong. Published by the American Chemical Society. 1992. To order call 1-800-227-5558.

■ *1993 GEN Guide to Biotechnology Companies*. Also available on 3 1/2" diskette. Published by Mary Ann Liebert Inc., New York, January 1993. For details call 1-800-M Liebert.

■ "Biotechnology Legislation Enacted or Considered by the 102nd Congress: Current Status and Future Prospects." Prepared by the Industrial Biotechnology Association. This report describes all major bills affecting the biotechnology industry from 1991-92. For information about ordering a copy, call 202-857-0244.

■ "Minutes of USDA's Agricultural Biotechnology Research Advisory Committee: Working Group on Aquatic Biotechnology and Environmental Safety." The meeting took place October 15, 1992 in St. Paul, MN. To receive a complimentary copy, please call the OAB at 703-235-4419; Fax 703-235-4429.

■ *Biotechnology, Agriculture and Food*. Published by the Organization for Economic Cooperation and Development. 1992. To order write to OECD Publications, 2, rue Andre Pascal, 75775 Paris Cedex 16, France.

■ *New Crops, New Uses, New Markets: 1992 Yearbook of Agriculture*. Prepared by USDA. Includes chapters on biotechnology, biofuels, technology transfer, and environmental issues. To order a copy, write to the Superintendent of Documents, Government Printing Office, Washington, DC 20402.

UPCOMING MEETINGS

Jan. 21: "Transgenic Animals: Their Creation, Growth, and Use." Lecture to be presented by two local entrepreneurs at a meeting of Montgomery County, Maryland's Biotechnology Network. Gaithersburg, MD. To make a reservation, call 301-762-6325.

Jan. 17-22: The 1993 Miami Bio/Technology Winter Symposium: Advances in Gene Technology: Protein Engineering and Beyond. Miami, FL. Call 1-800-642-4363; Fax: 305-324-5665.

Jan. 24-27: BIOEAST '93. Washington, DC. Includes a day-long session on agricultural application of biotechnology. Call 301-762-2957.

Feb. 8-9: Biotechnology Regulatory Basics. Lake Tahoe, NV. For more information, send a fax to Parenteral Drug Association Inc. at 301-986-0296.

Feb. 11-16: Annual Meeting of the American Association for the Advancement of Science. Boston, MA. The agenda includes a session on agricultural biotechnology. For details write AAAS, 1333 H Street, N.W., Washington, DC 20005.

Feb. 18: Biotechnology Litigation: Myths and Realities. Seattle, WA. For details write to Northwest Biotechnology Series, c/o Julie Holly, ZymoGenetics, Inc., 4225 Roosevelt Way NE, Seattle, WA 98105.

March 22-23: "Changing Food Policy Directions: High Stakes, Tough Choices." Washington, DC. Sponsored by Public Voice for Food and Health Policy and the National Food Processors Association. For details call 202-659-5930; Fax: 202-659-3683.

March 29-31: Genetic Manipulation of Plant Metabolism and Growth. Norwich, Norfolk, UK. For details write to M.J.C. Rhodes, AFRC Institute of Food Research, Colney Lane, Norwich, Norfolk NR4, 7UA, UK; Telephone: 060-35-6122.

March 31-April 3: Twelfth Annual Symposium: Current Topics in Plant Biochemistry, Molecular Biology and Physiology. Columbia, MO. Call Doug Randall at 314-882-7796; Fax: 314-882-5635.

April 5-8: "The Risk Assessment Paradigm After Ten Years: Policy and Practice Then, Now, and in the Future." Wright-Patterson Air Force Base, Ohio. Sponsored by Armstrong Laboratory, the Naval

Medical Research Institute Detachment, the Army Biomedical Research and Development Laboratory, and EPA. For details call Lois Doncaster, Conference Coordinator, at 513-256-3600, ext. 212.

April 12-16: ABC 7th International Biotechnology Meeting and Exhibition. Research Triangle Park, NC. Hosted by the North Carolina Biotechnology Center. For details call 202-234-3330; Fax: 202-234-3565.

April 19-22: First International Symposium on the Biology of Adventitious Root Formation. Texas. For details call Edith Franson, USDA Forestry Sciences Lab, Box 898, Rhinelander, WI 54501.

April 21-25: Molecular Genetics of Plant-Microbe Interactions. East Brunswick, NJ. Call 908-932-9271; Fax: 908-932-8276.

April 26-27: The Eleventh Annual ATCC Biotechnology Patent Conference. Washington, DC. Sponsored by the American Type Culture Collection. For details call 301-231-5566.

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